

## **REMARKS**

The above amendments to the above-captioned application along with the following remarks are being submitted as a full and complete response to the Official Action dated March 25, 2005. Applicants thank the Examiner for taking the undersigned representative's phone calls and providing the relevant information. In view of the above amendments and the following remarks, the Examiner is respectfully requested to give due reconsideration to this application, to indicate the allowability of the claims, and to pass this case to issue.

### **Status of the Claims**

Claims 1-2, 12, and 15-18 are under consideration in this application. Claim 13 is being cancelled without prejudice or disclaimer. Claims 1-2, 12, 14-15 and 18 are being amended, as set forth above and in the attached marked-up presentation of the claim amendments, in order to more particularly define and distinctly claim Applicants' invention.

All the amendments to the claims are supported by the specification. Applicants hereby submit that no new matter is being introduced into the application through the submission of this response.

### **Formality Rejection**

The specification, drawings and claim 2 were objected to for various informalities and the Examiner has requested corrections thereof. Claims 3 and 5 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite in claiming the invention. As indicated, the specification and drawings have been amended as required by the Examiner. Accordingly, the withdrawal of the outstanding informality rejection is in order, and is therefore respectfully solicited.

### **Prior Art Rejections**

Claims 1-4, 7 and 10 were rejected under 35 U.S.C. § 102 as being anticipated by the prior art stated in the present specification (pages 1-4, Figures 1-2; hereinafter "AAPA"), and claims 1-5, 7-9 under 35 U.S.C. § 102(e) were rejected as being anticipated by U.S. Patent No. 6,603,758 to Schmuelling et al. (hereinafter "Schmuelling"). Claim 6 was rejected under 35 USC § 103(a) as being unpatentable over Schmuelling. The prior art references of Johnson et al. (US 2003/0172170), Demirtjis et al. (6,697,864) and Noda et al. (6,816,890) were cited as being pertinent to the present application. These rejections have been carefully considered, but are most respectfully traversed.

The method (for example, the embodiment depicted in Fig. 7; pp. 10-14) for providing a data communication service (Fig. 1), which connects to a user computer 311 and an Internet service provider 305 via an access server 331 and a network 304 (including an address translation apparatus 341), comprises: **a step of connecting the network 304 to the Internet service provider 305 via a first router 347 and to the access server 331 via a second router 346 respectively;** a step 701 of said user computer 311 communicating with said access server 331 based on a **point-to-point protocol** (e.g., LCP; p. 11, line 15); a step of said access server 331 receiving a user ID and a password from said user computer 311 based on an **authentication** protocol (e.g., CHAP, p. 11, line 20); a step of said access server 331 sending said user ID and said password to said network 304; a step of said network 304 sending a first network address (i.e., a public IP address) assigned to said user computer 311 from said Internet service provider 305 to said access server 331 after authenticating a respective user by using said user ID and said password; a step of said access server 331 sending said first/public network address to said user computer 311 based on a **control** protocol (e.g., IPCP, p. 12, line 3); a step 709 of said network 304 translating a second network address (i.e., a private network address) sent from said user computer 311 to said first/public network address; and a step of establishing communication between said user computer 311 and said Internet service provider 305.

The invention as now recited in claim 6 is directed to an address translation apparatus 341 (for example, the embodiment depicted in Figs. 14-15; pp. 11-12 & 20-23) connected **via a first router 346** to an access server 331, which is connected to plural user computers 311, and **via a second router 347 to** a network which is connected to plural Internet service providers 305, 306, comprising: an authenticating part 1402 which authenticates a user by using a user ID and a password received from said access server 331 and which sends a private network address assigned to said user to said access server 331 by using a **point-to-point protocol** (e.g., LCP; p. 11, line 15; p. 21, 1<sup>st</sup> full paragraph); a translating part 1403 which translates the private network address into a public IP network address assigned to said user computer by one of said Internet service providers (p. 21, 2<sup>nd</sup> full paragraph); and an output part 1405 which outputs said public IP network address to said network (p. 22, 1<sup>st</sup> paragraph).

Therefore, telecommunication carriers can provide communication as well as contents-supply services to a user via PPP(Point-to-Point Protocol).

In contrast, in AAPA (Fig. 2), the NAT (Network Address Translator) 233 is located **in the ISP 203**, rather than **in a network 304** (including an address translation apparatus 341)

external to any ISPs. The NAT 233 in AAPA translates the private IP address into a global address (p. 4, lines 15-19) only for the ISP 203 such that telecommunication carriers, such as the PSTN (Public Switched Telephone Network) 202, have no access the NAT (Network Address Translator) 233 so as to provide contents services to a user (for example, via “*a local service server 344 used by the communication enterprise to provide its users with contents inside its own network not via the Internet*”, p. 10, lines 17-19; p. 26, 1<sup>st</sup> full paragraph). Therefore, the telecommunication carriers in AAPA can only provide communication services to the user computer. On the other hand, in the invention, the network 304 (including the address translation apparatus 341) translates a second/private network address to a first/global network address and is independent from any ISPs such that the telecommunication carriers can access the address translation apparatus 341 so as to provide communication as well as contents-supply services to the user computer.

Schmuelling only concerns cable TVs and a modem 128 in a LAN 109 (Fig. 1). Applicants respectfully contend that neither the modem 128 nor the LAN 109 is equivalent to the network 304 recited in claim 1 or the address translation apparatus 341 recited in claim 6.

Assuming the modem 128 (acting as a DHCP server) equates to the network 304 recited in claim 1, there is not any access server 331 connected to the modem 128 via a router 346 as in the invention. Even if the LAN 109 (containing the modem 128) equates to the network 304 recited in claim 1, there is only a router 132 connecting between the LAN 109 and the network 106, but there is not any access server 331 connected to the LAN 109 via a router 346 as in the invention. Similarly, assuming the modem 128 (acting as a DHCP server) as an address translation apparatus recited in claim 6, there is not any access server 331 connected to the modem 128 via a router 346 as in the invention. Even if the LAN 109 (containing the modem 128) equates to the address translation apparatus recited in claim 6, there is only a router 132 connecting between the LAN 109 and the network 106, but there is not any access server 331 connected to the LAN 109 via a router 346 as in the invention.

In addition, the modem 128 acts as a DHCP server using the Dynamic Host Configuration Protocol (DHCP) (col. 4, line 59-67), but not the point-to-point protocol (PPP) recited in claims 1 and 6. Dynamic Host Configuration Protocol (DHCP) is a client-server networking protocol. Most organizations use DHCP. A DHCP server provides configuration parameters specific to the DHCP client host requesting, generally, information required by the host to participate on the Internet network. On the other hand, PPP is commonly used to establish a direct connection between two nodes. Its primary use has been to connect computers using a phone line, though it is also occasionally used over broadband connections

(as PPPoE or PPPoA). Many internet service providers use PPP when providing customers with dial-up access (e.g. to the Internet). PPP is commonly used to act as a layer 2 (the "Data Link" layer of the OSI model) protocol for connection over synchronous and asynchronous circuits. PPP was designed to work with several network layer protocols, such as IP, IPX and AppleTalk.

As discussed, Schmuelling simply fails to provide any access server external to the modem 128 nor the LAN 109 to perform (1) a step of said access server receiving a user ID and a password from said user computer based on an authentication protocol, (2) a step of said access server sending said user ID and said password to said network; (3) a step of said network sending a first network address assigned to said user computer from said Internet service provider to said access server after authenticating a respective user by using said user ID and said password; and (4) a step of said access server sending said first network address to said user computer based on a control protocol.

Even if, arguendo, the modem 128 functioned both as the address translation apparatus 341 and as the access server 331, the modem 128 does not receive a user ID and a password from said user computer 103 based on an **authentication** protocol, the modem 128 neither send a first/public network address to said user computer 103 based on a **control** protocol.

Applicants contend that neither AAPA, Schmuelling, nor their combination teaches or discloses each and every feature of the present invention as disclosed in independent claims 1 and 6. As such, the present invention as now claimed is distinguishable and thereby allowable over the rejections raised in the Office Action. The withdrawal of the outstanding prior art rejections is in order, and is respectfully solicited.

## Conclusion

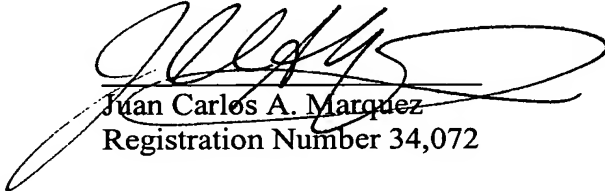
In view of all the above, clear and distinct differences as discussed exist between the present invention as now claimed and the prior art reference upon which the rejections in the Office Action rely, Applicants respectfully contend that the prior art references cannot anticipate the present invention or render the present invention obvious. Rather, the present invention as a whole is distinguishable, and thereby allowable over the prior art.

Favorable reconsideration of this application is respectfully solicited. Should there be any outstanding issues requiring discussion that would further the prosecution and allowance

of the above-captioned application, the Examiner is invited to contact the Applicants' undersigned representative at the address and phone number indicated below.

Respectfully submitted,

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